1. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-3 + 6x > 8x \text{ or } 6 + 3x < 4x$$

A. $(-\infty, a) \cup (b, \infty)$, where $a \in [-9, -3]$ and $b \in [-3, 2.25]$

B. $(-\infty, a] \cup [b, \infty)$, where $a \in [-9, -4.5]$ and $b \in [0.75, 2.25]$

C. $(-\infty, a) \cup (b, \infty)$, where $a \in [-3, 2.25]$ and $b \in [3, 9]$

D. $(-\infty, a] \cup [b, \infty)$, where $a \in [-4.5, -0.75]$ and $b \in [3.75, 9.75]$

E. $(-\infty, \infty)$

2. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$\frac{9}{4} - \frac{4}{7}x \le \frac{3}{5}x - \frac{4}{8}$$

A. $[a, \infty)$, where $a \in [-3.75, 0.75]$

B. $(-\infty, a]$, where $a \in [-0.75, 8.25]$

C. $(-\infty, a]$, where $a \in [-3, -1.5]$

D. $[a, \infty)$, where $a \in [1.5, 3.75]$

E. None of the above.

3. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$\frac{-4}{7} - \frac{10}{4}x > \frac{-3}{5}x + \frac{8}{6}$$

A. (a, ∞), where $a \in [0.3, 1.2]$

B. $(-\infty, a)$, where $a \in [-1.88, 0.6]$

C. (a, ∞), where $a \in [-2.4, 0.22]$

D. $(-\infty, a)$, where $a \in [0.67, 1.12]$

E. None of the above.

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4. Using an interval or intervals, describe all the x-values within or including a distance of the given values.

<center>More than 2 units from the number 6.</center>

A. $(-\infty, 4) \cup (8, \infty)$

B. $(-\infty, 4] \cup [8, \infty)$

C. $[4, 8]$

D. $(4, 8)$

E. None of the above

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5. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$5 + 8x \leq \frac{53x + 4}{6} < 9 + 8x$$

A. $(-\infty, a) \cup [b, \infty)$, where $a \in [-9, -1.5]$ and $b \in [-11.25, -9]$

B. $(a, b]$, where $a \in [-6, 0]$ and $b \in [-15, -6.75]$

C. $(-\infty, a] \cup (b, \infty)$, where $a \in [-9.75, -3]$ and $b \in [-12.75, -5.25]$

D. $[a, b)$, where $a \in [-8.25, -0.75]$ and $b \in [-11.25, -8.25]$

E. None of the above.

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6. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-10x + 5 < -9x + 9$$

A. $(-\infty, a)$, where $a \in [-7, 0]$

B. $(-\infty, a)$, where $a \in [2, 8]$

C. (a, ∞), where $a \in [-1, 8]$

D. (a, ∞), where $a \in [-11, -1]$

E. None of the above.

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7. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$7 + 8x > 11x \text{ or } 9 + 7x < 9x$$

A. $(-\infty, a] \cup [b, \infty)$, where $a \in [0.75, 7.5]$ and $b \in [3.75, 9]$

B. $(-\infty, a) \cup (b, \infty)$, where $a \in [0, 6.75]$ and $b \in [0, 6.75]$

C. $(-\infty, a) \cup (b, \infty)$, where $a \in [-6, -3.75]$ and $b \in [-5.25, -0.75]$

D. $(-\infty, a] \cup [b, \infty)$, where $a \in [-6.75, 0]$ and $b \in [-6, 3.75]$

E. $(-\infty, \infty)$

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8. Using an interval or intervals, describe all the x-values within or including a distance of the given values.

More than 9 units from the number 8.

A. $(-\infty, -1] \cup [17, \infty)$

B. $(-1, 17)$

C. $(-\infty, -1) \cup (17, \infty)$

D. $[-1, 17]$

E. None of the above

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9. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$6 - 6x \leq \frac{-7x - 8}{3} < 5 - 4x$$

A. $(-\infty, a) \cup [b, \infty)$, where $a \in [-2.25, 7.5]$ and $b \in [-1.5, 6.75]$

B. $(-\infty, a] \cup (b, \infty)$, where $a \in [1.5, 6.75]$ and $b \in [3.75, 6]$

C. $[a, b)$, where $a \in [-2.25, 5.25]$ and $b \in [2.25, 9]$

D. $(a, b]$, where $a \in [-2.25, 3]$ and $b \in [2.25, 9]$

E. None of the above.

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10. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-5x + 7 \geq 9x - 6$$

A. $(-\infty, a]$, where $a \in [-3.8, -0.4]$

B. $[a, \infty)$, where $a \in [-1.6, -0.3]$

C. $[a, \infty)$, where $a \in [-0.6, 2.5]$

D. $(-\infty, a]$, where $a \in [-0.7, 1.9]$

E. None of the above.